Digital government as a guardian of impartiality (?)
- Automated public e-services and its implications on Quality of Government

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Quality and Integrity of Governance

Elin Wihlborg
Unit of Politics
Department of Management and Engineering
Linköping University, Sweden
Elin.wihlborg@liu.se

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Abstract:

Research has shown that Quality of Government (QoG) mainly is generated and sustained on the output-side of the political system (Rothstein 2009; Rotberg 2014). Thus the public administration and services are critical for the experience of government as trustworthy.

The emerging use of digital tools for information and interaction among governments and other actors, from citizens to firms and even other states, are brought together in the concept e-government (Heeks & Bailur, 2009; Bannister & Connonly, 2012). A specific type of e-government services is the automation of decision making in public administration. It is a growing application especially for standardized services provided to citizens. Such digital systems can for example be used to calculate and evaluate applications and makes decisions based on how legislations, rules and local arrangements are designed into the system.

This paper outlines and discusses five challenges regarding how impartiality and other public values are re-framed into the design of automated public services. These are the challenges of system design to integrate impartiality, how human public servants act in relation to digital automated public administration, how to keep personal(ized) services impartial, challenges of identification and cyber-security, and finally implications on policy design of impartial e-services. The ambition is to tentatively form a framework for extended empirical studies on how automated e-government services can contribute to QoG.
Introduction

Figure 1: "On the Internet, nobody knows you're a dog" is a cartoon caption by Peter Steiner and published by The New Yorker on July 5, 1993. It has been spread and is one of the most shared cartoons (Wikipedia article with the same title).

This illustration from the childhood of the Internet indicates the changing relations of actors in digital context. A new setting of relations is formed, but still not institutionalized. The old cartoon can be read in several ways. On one hand there are possibilities for digital systems to make objective decisions without knowing who you are – to treat you impartial. On the other hand there are possibilities to hide your real identity and provide wrong input into relations and decisions made by digitalized systems – an increased risk of partial treatment and even miss-use of information.

Today the usage of Internet in public administration has grow into what is even called e-government and the latest trend is to use digital systems for automated decisions making. This is putting the issues of impartiality and quality of government in a partly new (digital) context and this paper will address some theoretical challenges of these developments.

Quality of Government builds on trust towards of the government and can simple be defined as ”having impartial government institutions” (Rothstein & Teorell, 2012:xx s.2 in chapter). The impartiality of institutions in turn builds on the work and function on the institutions and thus the daily activities formed within the institutional setting are the outcome defines the
trust in government (Rothstein 2009; Rotberg 2014). Impartiality has here been identified as a key of quality in government both in large empirical studies (Rothstein & Teorell, 2008) and from an ethical point of view (c.f. Agnafors, 2013). Impartiality in turn can in principle be explained as decisions made on objective criteria, where no partial or biased decisions are made in this case by public agencies. Thus the interface of public administrations stands out as a critical point for building and sustaining impartial processes and thereby also Quality of government.

The use of Internet and other digital technologies in government are promoted by and integrated into strives to improve the public administration by making it more efficient, transparent and accessible to citizens and others (European eGovernment Action Plan 2011-2015). This development is described by the term e-government and includes several aspects of usage of digital (electronic) technologies within governments (Heeks & Bailur, 2009; Bannister & Connonly, 2012). The most current trend is to use of new forms of automated systems and making them usable on-line for citizens and others. It is a technology that is building on and developing the use of digital systems in contexts as different as industrial production and shopping on Internet. These systems are based on what in broad terms is called artificial intelligence (AI) and big data. Such systems can for example remember your shopping preferences and make up personalized advertising when you go on line, or they can make a production system “smart” to ask for service and maintenance even before the problems occur. Thus it has a potential to manage more information and decisions rapidly, transparent and in a way that look personalized, even without any personal interaction. This is indeed a potential innovation also for the public administration that is striving with trust in and quality of government. There might be a potential in the use of such technology to automate parts of administration and decision-making.

This development is taking the e-government practice one step further by forming systems for automated digital decision. Based on the legislative arrangements for communicating such systems can provide and communicate a decision to an applicant – whether that applicant be a citizen, user, company or any other stakeholder. They are integrating the new forms of AI to automatically process incoming data. Here, the computerized system becomes the decision-maker. Since such a system, in contrast to human professionals, can be designed to take only certain aspects into consideration it has a potential to make more objective decisions and as such it has a potential to be impartial. A well-designed system based on a clear policy thus has the potential make objective decisions in line with the relevant legislation. There can be less
openings for such a system to make biased or partial assessments. However, there are also risks connected to this development regarding identification and information provided, as hinted in the cartoon above. There are also needs for public servants to develop new competences as co-workers to these systems. Such challenges will be discussed here, but first I will give a brief example of an automated digital decision making in public administration.

This example is a system for the re-paying of student loans administered by the governmental agency CSN (Swedish Student Aid)\(^1\). Similar systems are used in Canada\(^2\) and Norway\(^3\). The decision on how much and when to repay is calculated and communicated automatically to the former students without any personal interaction from staff at the agency. There is a clear legislation regulating the forms of repayments, based on the income (two years back) and since this is publicly available information through the compulsory income tax declarations in Sweden, the former student does not have to provide any additional information. However, the legislation also points out defined situations when the re-payments can be reduced. If the client can show that they full fill these criteria by providing additional information to the system, they can get a new automatically processed decision based on the regulations. All this can in most cases be processed without any personal contact with staff at the CSN or by guidance of them (Wihlborg, Larsson & Hedström, 2015).

This example shows how an automated digital decision making in public administration can make impartial decisions, and not letting the humans of public administration into the processes. However, the design of the system and thereby also the underlying legislation and its forms are essential for the potential of the impartiality of the system in particular and for quality of the governmental systems as the system is a part of. In line with these challenges this paper will elaborate on and discuss the potential of automated public decision making systems to be impartial and thereby support quality of government.

**Aim of the paper**

The aim of this paper is to elaborate on discuss the impacts of automated digital decision making in public administration, as a form of e-government, on impartiality in particular and quality of government in general. The overall research question is if and how automated

\(^1\) [http://www.csn.se/en/2.1034/2.1036/repaying](http://www.csn.se/en/2.1034/2.1036/repaying)

\(^2\) See for example the APDM in British Columbia: [https://studentaidbc.ca/repay/understand-loan-repayment](https://studentaidbc.ca/repay/understand-loan-repayment)

\(^3\) The English web-page is: [https://www.lanekassen.no/nb-NO/Languages/Repayment-of-loans/](https://www.lanekassen.no/nb-NO/Languages/Repayment-of-loans/)
digital decision making in public administration can guard impartiality and thereby contribute to Quality of Government. The main arguments are organized around five challenges:

- Challenges of system design to integrate impartiality
- Challenges for human professionals in digital automated public administration
- Challenge of keeping personal(ized) services impartial
- Challenges of identification and cyber-security
- Challenges for policy design of impartial e-services

The paper hereby strives to contribute to two contemporary research fields in public administration the e-government field that develops in the intersections of information system sciences and public administration and the quality of government field that has a more political and normative ground in the public administration field.

Outline of the paper

This paper is outlined in three main sections after this introduction that also includes a brief note methods and limitations of the study. In the second section a survey of the field of quality of government is presented with a special focus on its relation to public administration and in particular the concept of impartiality. The second main part of the paper presents the e-government field in a similar way with a specific focus on its relation to public values and public administration. This sections ends with two illustrative examples of digital automated decision-making that will open for some challenges of the impartiality discussion. The fourth section of the paper, is also the main art of the paper, here the five challenges are outlined and tested. Finally, some additional comments are made and I will conclude by proposing a set of questions for future research based on this perspective.

A note on methods and research design

This paper is mainly conceptual and strives to elaborate on five identified challenges for quality of digital government and in particular on impartiality of automated decision making. The two research fields – e-government and quality of government – are addressing the context of public administration in partly different ways and thus they are not fully compatible. Thus the argumentation, in this version of the paper, is still impregnated of these differences and I will need the help of the workshop at EGPA.
Instead of presenting a full case study in this paper I will focus on the five challenges outlined above and refer to two on-going case studies that is guiding my theoretical elaboration. Both these case studies are conducted with colleagues in my research group and I do reer to our work in progress. The first case is on study grants, as presented in the introduction, and the second case is about the Swedish Social insurance agency. In both cases policy documents both general parliament decisions and detailed documents from the agencies have be analyzed. The on-line services have been analyzed both from an end-user perspective and by discussing it with public servants in each of the agencies. In addition a handful of interviews have been conducted with key-actors in the agencies to illuminate the reasoning behind the automated systems.

This paper includes several delimitations and the most relevant ones, as far I as I’m aware of, are my bias of having a mature and extensive welfare state as my main point of reference and that I have been occupied in the e-government research field for some years. Hereby, the illustrations as well as my own interpretations are grounded in the mature Scandinavian welfare state context with generally high trust in government (Rothstein, 2007; 2008). The Swedish governmental system is also characterized by high degree of multi-level arrangements opening for discussion on of the issue of size (Montin & Granberg, 2013). Thus more general implications in relations to other types of governments and in particular welfare regimes (c.f. Esping-Andersen, 1990) are not made explicit here. Even if this paper is about digitalization and use of digital tools in public administration it leaves the technology as a black box.

**Conceptualizing Impartiality in the context of Quality of Government**

Since the main part of this paper, as in the EGPA workshop version, is on the five challenges I will keep the discussion on QoG and impartiality quite short here.

**Quality of Government**

Quality of government (QoG) has been a hot topic for research during the last decades. High quality of government is shown to be a main source of economic growth and high social trust (Dahlström, Lindvall, & Rothstein, 2013; Rothstein & Teorell, 2008b). In contrast low quality
government institutions have tremendous negative effects on the health and wealth of societies.

The conceptualization of quality of government has emerged through studies of performance and evaluations of different models of governments. In contrast to previous conceptualisations, Rothstein’s model of QoG builds on a pronounced normative foundation rather than taking into account the practices and outcomes of governmental activities. Rooting the assumptions in modern political philosophy on democratic theory and theories of justice, Rothstein and his colleagues argue that the quality of government should be treated as a normative problem (Holmberg & Rothstein, 2012; Rothstein, 2012; Rothstein & Teorell, 2008a; 2008b). However, in this paper that normative problem is set in a new context.

Based on Easton classical model of government, this approach of QoG distinguish inputs and outputs as fundamental dimensions that connect the government to its society. Input-side relations would in an e-government practice appear as e-democracy and tools for increased participation (Åström, et al. 2012; Åström & Grönlund, 2012). Public core values are fundamental in the more normative setting QoG as participation, democracy and transparency. However, more personal interaction with government agencies and the impression of public services, on the output side of government have shown to be a key in the quality of government (Rothstein & Teorell, 2008b). Here they have showed that the corresponding and complementing impartiality principle plays a key role for QoG. Their normative QoG model requires both democracy in the access to power and impartiality in the exercise of power (Rothstein & Teorell, 2008b).

This model of QoG, we argue, also has a potential to guide a further modelling of how quality of eGovernment can be achieved and what aspects of quality of eGovernment can be further developed. In order to show this we also have to address the underlying conceptualization of legitimacy of governments, since it outlines pre-requisites for quality of governments.

Rothstein and his colleagues argue that the output side legitimacy is based on the daily decisions made by street-level bureaucrats in governmental authorities that essentially affect the citizens’ day-to-day lives and thus have a direct effect on their support and confidence in the government. In these daily practices impartiality, in particular in the personal meetings of street-level bureaucrats and citizens, is essential for governmental legitimacy. Rothstein
illustrates it through this example: ‘if the police would not protect you because you are an X-type of citizen; if the fire-brigade would not come to your house because you are a Z-type citizen; if your children would be systematically discriminated against in the schools because they are Y-type children; and if the doctors at the hospitals would ignore you because you are a P-type person, then you are in real trouble’ (Rothstein, 2007). Impartiality principle is obvious in this example.

In line with this argumentation, legitimacy at the output side is mainly gained when street-level bureaucrats in political authorities are making decisions regarding issues close to citizens’ everyday life and their use of public services. This model has been empirically developed in the Scandinavian type of welfare states and it has a bias for these type of arrangements of public services, like extensive public social security schemes and services like child-care, support for industries located in sparsely populated parts, or compulsory care of drug-abusers – areas requiring daily and continuous decision-making based on specific knowledge of the case (Rothstein, 2007). Political legitimacy, and hereby quality of government, is in such an analysis created through impartial implementation of specific policies. In such a context political legitimacy has shown to depend rather on the quality of government than on the quality of democratic elections or representation that are designed to channel equal access to power (Rothstein, 2007; Rothstein & Teorell, 2008b).

Rothstein’s model of QoG has received critique, among other aspects the key focus of impartiality has been discussed, since it may exclude and hide other central principles promoting QoG. An important complement or even substitute has been argued to be the accountability principle and the justification of trade-off between equally desirable but competing goals in the exercise of public authority (Agafors, 2013; Wilson, 2008). This focus on impartiality, also have to be understood in relation to the forms of government in extensive welfare states. Rothstein and his colleagues are including complimentary arguments based on principles such as democracy and majoritarian rule, the rule of law; effectiveness and efficiency, accountability, among others. In this discussion, however, these aspects will be seen as complemental to impartiality in defining QoG.

Impartiality – a key element for QoG

Impartiality essentially means that governments and their agents treat similar cases in similar ways, and by rule of the law. But there is still an important and complicated balance between the human interpretation and judgment on one hand and the legal objectivity on the other.
Thus we have to organize public administration to “compensate for the inherent bias of human judgment” (Stensöta, 2012: 90). Automated digital public services may have a potential to contribute just to these challenges, as will be discussed further in this paper.

There are two essential parts of impartiality in public administration. Firstly, it is defined in the formulations of policies and legislation as such. Policies can be formed for example with a clear gendered bias, as for example if there is a policy on maternity leave instead of a policy of parental leave. Some times such partial statements are made unconscious, but they can also be consequences of the public values in the specific governmental setting. Secondly, there has to be a impartial exercise of power, as decision-making. QoG hereby becomes clear and visible through the implementation of governmental policies and the processes of decision-making and daily service provision. Without risking impartiality it is still possible to formulate public services for specific target groups and allocating different resources to meet their demands (Stensöta, 2012). The performance management of public services and the use of quality management are not always incorporating these aspects when evaluating the quality of public services (Elg, Wihlborg & Örnerheim, forthcoming).

Automated decision making – e-government one step further

Automated digital decision-making is a specific type of e-government. It is a growing field of applications especially for standardized services provided to citizens. Based on formalized and defined rules and legislation it is possible to design an automated digital system to calculate and evaluate applications to make decisions and communicate to the clients. This is a development of the more general use of information and communication technologies in societies in general and in governmental contexts (e-government) in particular. In this section I will firstly lay out the broader perspective on e-government, as the use of electronic and digital technologies in government and secondly present an example of an automated systems for social security schemes in Sweden.

e-government a new context for governments

Information and communication technologies (ICT) are widespread and integrated also into governmental contexts as e-government (Heeks & Bailur 2007; Yildiz 2007; 2012), such services range from providing easy accessible information regarding the opening hours and location of municipal recycling stations, to advanced services, such as the submission of
income declaration forms to the Tax Agency. Even if e-government in many cases has developed as practical solution and often driven by new technological tools rather than democratic and governmental processes in focus. These normative imperative are made clear in this type of commonly used definition of e-government:

“… e-government can be used to deliver better compliance with the law and deliver greater fairness by removing humans from the process and the decision-making chain. For example, the process of formalizing rules in a system and embedding them in code could reduce or even eliminate the risk of corruption and abuse of the law by public servants.” (Bannister & Connolly, 2014, p. 125)

There is a strong emphasis on the trust in technology and arranging government based on the models of information management provided by information and communication technologies. The technological developments provide openings for more advanced services that are accessible through more devices. The current trend in e-government is to automate standardized routine tasks (SOU 2014:75; European eGovernment Action Plan 2011-2015). But these policy documents still focus on efficiency and technology rather than public values like impartiality, and strong beliefs in, and expectations about, the potential it holds and the future possibilities it may offer (Meijer & Thaens 2010; Heeks & Bailur 2007). There is, in the definition above as in the policy documents, an interpretation that automated systems may be more secure and trustworthy than humans.

Digitalization affects all parts of the political system. In terms of output, it affects participation and discussions in social media. From an input perspective, it supports efficient administration through new forms of interaction with citizens, who are the users of public services (Fountain 2001; Jansson & Erlingsson 2014). Since, as discussed above, legitimacy in modern welfare states mainly is generated at the output side of the political system the focus here is on public e-services in relation to impartiality in decision-making.

In addition, the contemporary development of e-government cannot be separated from the contemporary trends of New Public Management (NPM) reforms and other forms of market-driven transformations (Bellamy 2000; Osborne ed. 2010). Such reforms have also been particular strong in the public welfare services in the Scandinavian welfare states (c.f. Lane, 2011). It might even be argued that NPM has been dependent on the technologies opening for e-government (c.f. Dunleavy, et.al. 2005).

Swedish public administration has a long tradition of integrating e-government and using information technology for administrative issues. Since the mid 90’s it has been on the
political agenda and several agendas for digitalisation have been adopted (Andreasson, forthcoming; Melin, 2009; Wihlborg, 2000). Since 2008 a governmental Delegation on Digitalisation has been working on how to promote ICT innovations both within government and in the society more broadly. In a recent report they focused on automated digital decision-making in public administration they concluded (SOU 2014:75) that it can be introduced without any further legislative concerns in the most simple errands where no further assessments.

“The outcome in these routine decisions are defined of given parameters, that can be answered simply with an yes or a no, without any assessments that has to be made by a human being.” (SOU 2014:75, p. 16, authors own translation)

It indicates that in practice automated decision-making is not an issue that demands further policy or legislative re-arrangements but rather just an issue for suitable design. In addition the mention, as the only comment regarding the individual citizens perspective, that:

“… better technical and administrative functions for automating the administration does not impact negatively on the registered person's personal integrity and neither to their legal certainty” (SOU 2014:75, p. 78, authors own translation)

Hereby the governmental investigation does not pay any particular attention to values like impartiality, legal certainty nor democracy in more general terms. Instead efficiency, transparency and economic values are the key values emphasized as in most digitalization policies. Similarly practical automated services in national agencies are designed to be efficient and easy to access as presented in the next section.

“My page” at the Swedish Social Insurance Agency – an example of automated decision making and services

I have here chosen to illustrate the contemporary development of automation in public administration by one of the largest agencies in Sweden – the Social insurance agency. This case is selected since most Swedish citizens have contact with the agency that is managing the main public social insurances as the sick leave payments, basic pensions and the extensive Swedish parental leave including payment for short time parental leave (in Swedish VAB). The agency is, together with Swedish Taxation Agency, a forerunner when it comes to automation of public services on-line (SOU 2014:75).

Based on the broad coverage of its services the Social insurance agency started to use computerized systems already in the late 1970’s, mainly for the internal administration (Göranzon, 1990). The aim was then, as it is today, to use computers as a tool for increased
efficiency, in combination with a uniformed standardized administration process. However, at that time access to computers among the general public was indeed low. Instead the public servants within the agency had to manage the automated decisions before communication the decisions over paper mail to the citizens. The study by Göranzon (1990) showed that the public servants, mainly women with a basic academic education, found that computers made decision-making process less transparent and the outcome difficult for them, as public servants, to understand. They didn’t really trust the systems and there were even examples of double-checking the results by manual calculations.

Today the agency has extensive digital support both for internal administration and with an on-line interface for citizens using their services. The high level of Internet access among Swedes today (REF) is also motivating the development of the automated services (SOU 2014:75). The agency even have applications for smart-phones (apps) for some services, in particular for the parental leave scheme that is mainly targeting young user. The main log-in web-page to the agency is shown in figure two.

FIGURE 2: The front-page of public services by the Social insurance agency.
Most citizens access the system of the Swedish Social Insurance Agency through the “My page” (Figure 3). This page is reached by using one of several types of electronic identifications like banking-ID or mobile electric-ID. Hereby the agency puts a focus on identification and security as a key for actually relating to the “right” person – a key element of trustworthy e-government services (Lips et al. 2009; Wihlborg 2013).

![Image of the automated services interface](image)

**FIGURE 3:** The interface of the automated services after personalized log-in at the Social insurance Agency.

The design of this page focuses on personal efficiency of the automated services. By focusing on the benefits and efficiency gains for the users the authority may hide the automation and their internal gains made by increased efficiency. Here is a focus on the single individual using the system, and there are no indications of the system as a general welfare service in the interest of the public. The most common use of the system is to register income changes and to report absence from work that qualifies for any of the social insurance schemes. The payments are made monthly from automated decisions based on
the information provided by employer, and for sick leave, if more than one week, has to be attested by a certificate from medical doctor.

There is a heading saying: “Total control of your errands!”, indicating the personal responsibility and that most users of the system has more than one errand running at the time. There are both personal information and possibilities to keep track of your family members’ activities in relation to the agency and to register SMS or e-mail to get a notice when new information is provided.

This illustration is showing how automated services can be arranged. This will now be discussed in relation to QoG by focusing on how automated services relates to impartiality and thereby to QoG.

**QoG values in automated e-government – The five challenges**

In this section I will elaborate on the intersection of the automation of e-government and impartiality through the five challenges identified in the introduction. Firstly, the design of systems will be discussed. Secondly, I will address the changing roles of public servants that formerly have acted as the guardian of democracy in public administration Thirdly, the potential to make services more personalized are discussed. Thereafter, the more risky challenges relating to identification and security on the one hand and policy design on the other is addressed. These challenges are not excluding each other and they are related and can even be integrated even if discussed as quite distinct arguments here.

**Design of automated systems as to make them “digital guardians of democracy”**

The first challenge discussed here is the design of the automated decision-making system, since it makes up the digital interface of public administration. The personal interface of off-line (face-to-face interaction) services has proven to be a key aspect of impartial public services in empirical studies in particular as an ethic of care (Stensöta, 2012). To function as an impartial digital guardian of democracy the automated digital systems has to communicate public core values as if it communicates an ethic of care. Thus the design of the system is critical for the interpretation of impartial digital public services.

One type of benefit of digital interfaces, in contrast to personal meetings, are that the only information asked for and taken into account is the one that is relevant in the specific issue. It
is also possible to hide other types of information, like to hide names that may indicate gender, ethical origin or in some cases class.

In some cases a decisions can be presented almost immediately to the user through the automated service. Hereby the impartiality is made visible, either you fulfill the criteria or not and the decision is simply made quickly. Such an example is the housing allowance administrated in Sweden by the Social insurance agency. The income, rent for the apartment and household size are inputs for an immediate response to the applicant. The accessibility and also transparency of the public services can hereby be increased by a digital automated system. It becomes visible what is mattering for your possibilities to get the service, and it is also obvious that no other aspects are taken into account for the decision. The accessibility can simply be improved both in regard of place and time. Most on-line services are accessible 24/7. All these benefits are, however, dependent on the access to and knowledge to use the services, as discussed as forms of digital divides (c.f. Norris, 2001). Thus there are needs to design systems reachable for all types of users with indeed different competences (Gidlund-Lindbladh, 2010). There is also a need to design the systems also for less reliable infrastructure, like in rural areas and by mobile devices, by making web-pages easy to download.

In the case of the social insurance agency, as presented above, the legislative framework was in the competence of the professionals before the automation, but now the automated web-systems has become the carrier of these “competences”. The embeddedness of policies into technologies and e-government systems has also be identified in a study by the British police (Cordella & Jannaci, 2010). The social insurance legislation is embedded into the technology. The design of the system has to translate both the specific legislation and the public core values. The objectivity of impartiality cannot be for seen in all aspects. For examples the equal treatment of parents, when there are cases regarding their children has been highlighted as such a trick issue (Stensöta, 2012).

Since digital governmental services are used in several interfaces as web pages, mobile applications and sometimes on a public or borrowed device, there has to flexibility in how the interface is presented. Firstly, it has to be clear that it is a public service that is accessed if public values and policy-based arrangements should be communicated. This is fundamental both for trust in the systems, but also the quality of the services provided and the type of response. This not at least important since on-line contexts make the differences between
public and private services less obvious. Some public on-line services looks like private banking services, as can be seen in the illustration above. The similar interface may make citizens demand a more customer-oriented response, without seeing values as equality or rule by the law and this is a challenge for system design to keep up trust in public values.

To conclude, through the design of services there is a great potential to improve impartiality and thereby also QoG. A key is to ask for information that is relevant to the specific service and all other aspects of the individual can be hidden in the decision-making. However, the web-pages or other digital interfaces have to be open for different forms individual statements. The core public values of the specific welfare state have to be transparent through the design based on values like equality, accessibility and individualization if that is relevant.

The new roles of human professionals in public administration

A common argument for the development of automated digital services is to make them more efficient and reduce the costs of human administration. There is often an ambition to cut the costs for staff in public administration. However, the challenge discussed here relates to the new roles that the public servants take on when they get a new co-worker – the automated system (this could be even more inspired by and discussed through Actor Network Theory).

In an on-going pre-study we have identified two strategies adopted by staff in the public administration for Study grants in Sweden (CSN) in relation to their new automated services. The staff said that they could either see themselves as advocates for the former students in relation to the digital automated system, or as defenders of the automated system, arguing in favour of the decision the system has made. The second strategy indicates that the system is seen as correct and impartial; since it is in line with legislation and public values. The first strategy, however, indicates that there are openings for a personalized and flexible use of the rules, allowing the administrators to work around the system (Wihlborg, Larsson and Hedström, 2015). Here the interpretation of professional competences are seen differently and the need for use of such competences are a key challenge in relation to digital automated public services.

Since the public servants often have been seen as guardians of impartiality, by their professional competences and virtue (Lundquist, 1998), in this context there is a need to develop new competences. The professional public servants face discontinuities, that is, a lack of coherence in aspects of their work, such as the work setting, task, relations with other
workers or managers and in the aspect of interaction with citizens and clients, such as applicants of services, users of the services and also other organizations supporting the public welfare services. They also have to develop new competences regarding the digital systems, not just the legislation that is forming the system. There might also be a need to improve he service level, by guiding and supporting the use of the automated services.

To conclude, the public servants may have a potential to improve the quality of government even when a digital automated system is making the main part of their work. A key could be their competence to guide users of the systems to understand the basic core values of the legislation framing the system. In addition they also may have competence to manage the most odd cases that do not fit into the systems, however, in such case impartiality may not be the key value addressed.

Impartial personal services – hospitality without meeting the personal needs of the “customer”

A digital automated system can have a personal welcome, as when you log-in to the Swedish Social Insurance agency (figure 3 above). In spite of the personal address and the name give here, the system can be designed for impartial treatment through back-office processes and still have a personal “front-office” approach. Thus a digital system may have a potential to address citizens in personal ways, without including the personal aspects in the decision. It is a form of personal impartiality that probably is most difficult to manage in personal relations.

The distinction between consumers and citizens are a key issues for the interpretation of public service provision in general (Elg, 2017) but it might have to be seen in another light when public services and decision-making are made in digital contexts. The often blurred distinctions between private and public services on-line and the close interplay of e-government (Reddick & Turner, 2012) and NPM may make even more similar since private providers can be included in the provision of services. Thus market values and customer-perspective also influence public services. If the citizen is addressed as a customer, other expectations and values are embedded into the arrangements of the services. In addition the personification of public services may be increase by the increased use of performance measurement and “customer/client” surveys. In the ambition of increasing the experienced quality of public services, private sector values may influence also the interpretations of good public services (Elg et.al., forthcomning).
Thus there is a need to pay special attention to how the personal interaction is arranged to keep up the impartial impression of the services and still reach good service levels.

Even if impartiality almost is the opposite of meeting the needs of the customer there is still a potential to make systems that make impartial decisions and communicates them in personal ways (I hope).

**Identification and cyber-security – risks of increased automations**

A key for safe and impartial use of the automated digital services is that the systems can identify the user correctly. Identification is critical for services and to make impartial decisions in line with legislation. Thus identification and cyber-security becomes a key for impartiality in public services. In the illustration above the log-in page is accessed by secure log-in that is provided by the government through other channels than the specific agency. The same type of log-in is used for more services. Such a system has both been argued to be flexible, more efficient and easy to access by the Swedish e-delegation. But there are is a need to keep up the development of safe log-in and to make it match new applications and uses of on-line services (mainly in mobile devices).

A potential development of automated digital services is that the system it self becomes smarter and more automatized there are new risks emerging. In relation to impartiality of governmental services there is a risk that smart systems using AI also opens for a risk that the system as such can learn and track different digital behavior of certain user on-line. Since there are tremendous digital foot-prints made up by our use of on-line services there are unforeseen risks when big data are generated on personal information. Information security may emerge as an aspect of trust in public services in relation to key values as legal security and impartiality.

**Challenges for policy design**

The final challenge I will raise regards how policies are formed to protect and guard impartial treatment in digital public services. The potential of automated decisions may even influence how policy programs are designed and addressing the citizens’ individual needs and demands.
In recent years, a main trend of policy programs, in particular in the welfare services, is the focus on the outcomes and aims of a certain policy rather than detailed regulations. This is in line with NPM and the use of performance management (e.g., Lane, 2011) and it makes policies more general, relying on the competence of the professionals in the administration. However, when it comes to digital automated decision making, there is a need for basic statement to say yes or no in a decision, as expressed in the Swedish automation report (SOU 2014:75), and this is quite the opposite from the general policy development.

Therefore, it is a challenge to formulate policies and legislation that both focus on the aim of a policy and provide detailed statements that can be translated into a single yes or no. However, one example of such policy translations that has been successfully implemented as an automated service by the Swedish Social Insurance Agency is the gender equality bonus in the parental scheme. Gender equality is considered a basic core value of the Swedish welfare state (XX). The social insurance for parental leave has been part of the gender equality policies since the early 1970’s and today it is giving parents the right leave of absence from work for 12 months and compensatory payment from the insurance. However, since mothers have tended to use most of the leave, there have been several attempts to encourage fathers to use more of the leave. The most recent policy initiative in this area is called gender equality bonus, as an additional payment to couples that share the insurance more equally. This is automatically calculated by the system for the parental leave insurance. Parents that reach a certain level get the extra payment from the Swedish Social Insurance Agency (Information at webpage, accessed July 2015). This system was designed to be cost efficient and transparent already in the policy formulation phase (… Parliament protocol by …) and since there was a high level of consensus of the core values for the policy change the policy was distinct and the regulations formulated to fit into the designed e-governmental structure. If there had been a manual calculation of the bonus for each applicant, it would probably not been cost efficient and maybe not at all manageable. This is a policy made possible to implement by the digital automated decision system and it improves impartiality and transparency of the outcomes. Even if far from all policies can be translated into design implications like this, there is a need for more awareness of the potential of automated decision making.

Another policy implication can be related to the size of governmental bodies, since there is a clear economy of scale in these processes. The larger administrative bodies have more to gain from new automated systems and they also have more resources and competence for such development processes. Local governments and in particular the Scandinavian ones with high
levels of local autonomy may find it complicated to keep up autonomy and still develop
digital automated services. This will open more constitutional discussions if impartially also
can have a regional implication.

This challenge of automated public services indicates that policies and might even
costitutional arrangements have to be formed in relation to the use of digital automated
services to keep up impartiality and quality of government.

Remarks on the discussed challenges

Hereby I have proposed that an increasingly important characteristic of quality of government
is generated through digital non-personal interaction with government agencies, and thus the
design and framing of e-government will become a key for continued development of quality
in government. The main conclusion of this discussion is that there are potentials to improve
quality of government and in particular impartiality by automated digital public services.
However, there are several aspects to take into considerations to make such improvements
and here three points promising challenges and two more difficult challenges have been
discussed. There is a potential to design digital services to be impartial, since a digital systems
just include aspects that are relevant in the specific case. There is also a potential for
professional human public servants to coach and support the users of the digital systems to
improve the use and input of information into the systems. Thirdly, the systems also have a
potential to be personal and provide more personalized services by remembering personal
data and making a personal addresses. The challenges discussed here are so far tentative,
since this is an ongoing development, there is a need for further empirical studies as well
conceptualizations.

Automated public administration as a promoter of QoG – Some
additional remarks

The main conclusion of this paper is that there are potentials to improve quality of
government and in particular impartiality by automated digital public services. If nobody
knows who you are on the Internet, impartiality has to be faced in new ways.

Automated public decision-making has here been discussed as five challenges, and even if
these are not exclusive nor fully distinct they will be summarized and discussed here. As
indicated in the method section above, these challenges are so far contextualized in a mature welfare state regime and thus I will briefly make two notes on context. The discussion has to be extended beyond the mature western welfare states and it also expands the meanings of geographical grounding of governments in digital contexts. Finally, some lines of further research are discussed.

The first challenge of impartiality in automated decision making was the design of the system, since it is a key of how the user experience the (digital) meeting with the governmental organization. Here impartiality has to be secured by a broad and open pre-understanding of the users situation and not to be mixed with the default impressions of users as customers. The second challenge was identified among the public servants that formerly have acted as the guardian of democracy in public administration, but now had to take on new roles by guiding the users in the digital systems and balance the personal support with the strive for impartiality. A digital system can make personal address but still not take personal issues into account in an impartial decision, that has a clear potential to improve the quality of government if well designed. A challenge that has a potential to risk impartial treatment is related to the security risks, protection personal information, safe log-in and identification. There is also, a more general, challenge to formulate policies to open impartial automated decision making that demands new competences in policy design to make public administration more impartial and trustworthy and thereby contributing to high levels of quality of government.

A limitations made in the introduction of the paper was to focus on public administration in mature western welfare states, however, it is almost impossible to avoid the implications of this discussion on developing contexts. There are indeed a potential to improve quality of government by automated decision-making in states with low trust in government, more corruption and praxis of bribes (you cannot bribe the computer ☺). An illustration of this is the Kenyan ICT policy, that is pointing out the demands to increase the use of e-government and automation to increase the demands for efficiency and transparency (National ICT Masterplan, Kenya, http://www.icta.go.ke/national-ict-masterplan/, p. 57).

A related, but indeed more far reaching, discussion on context relates to the territorial grounding of a state as the basic legitimating premises for governments, and hereby also for public power. However, this basic premises is, or can at least be challenged, by the increased use of Internet and not at least by using digital interfaces for interaction between public
administration and the citizens. When public services can be reached on-line the geographical contextualization can play a less defining and important role for legitimacy. This opens for new challenges on classical discussions on inclusion that has to be addressed in further research.

This is indeed a field that develops in practice and since most governments are always searching for more cost efficient administrative systems. Thus we can expect a growth of fields for empirical and practical studies. However, based on my arguments above I will in particular point at the need to focus on how public values are translated in to such systems and the importance to make public administrative systems still part of the public domain to improved and address the quality of digital government. The focus on values can be addressed along, at least, four lines: the core values of (quality of) government, the need for comparative studies, the issues of accountability and the risk of biased interpretations of values and norms.

Public key values have to be expressed both in the design and usage of the systems. Since most digital systems are developed in private settings and by private companies there is a need to highlight and uniqueness of quality indicators in governmental contexts. The public services can in on-line context easily been mistaken for private market services since there might just a click or two between them. The different forms of funding, distribution and access to the public services and benefits has to be transparent to carry and articulate public values and the impartiality of the service provision. If public services would be evaluated in line with market-based services provision the interpretations of quality would indeed be messed up.

But there are not just universal public core values, and thus also the automated digital services have to be contextualized in line with the unique setting in governmental system. Research has to focus on, and contribute to systems design, that makes such government specific values visible and transferable into digital settings. This opens for a need of comparative studies of design of automated digital services. The citizens’ access to and usage of on-line services will also play a key role in such comparisons that has to focus on the institutional arrangements of public services. Comparative studies can preferable focus on both the design and function of automated systems as well as the underlying public values and how they are translated into digital automatic systems in in each case, and not at least the interplay of these aspects. There could be a prospective benefit in searching for factors for good digital government both to improve the potentials for comparisons and to suggest design implications. Hereby, a more

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general model on quality of digital government might could emerge, that not at least has a potential to support the governments that starts to build their services with digital technologies from the beginning.

Quality of government builds can also be connected to high levels of transparence and clear arrangements of accountability. When adding an automated digital system to such a discussion it is obvious that also the computerized system has to be included into the network of actors (Woolgar & Neyland, 2013). It might be easy to blame the computer. Here the roles of public servants and their professional competences have to be taken into account as well as the systems for identification and information security.
References:


Esping-Anderssen 1990;


Montin & Granberg, 2013


Palme et.al. 20…). Scandinavian welfare states …


